Please note: Activities and correlations listed are a sampling of activities that may be conducted on your field trip. Do to time constraints, weather, and seasonal conditions, not all activities may be accomplished during the field trip. In the event of severe inclement weather, alternative activities will be conducted inside the Nature Center.
**GOING ON A BUG HUNT (Prairie)**

We are going on a bug hunt! Big bugs, little bugs, noisy bugs, all bugs! Students will be ‘bugging’ to learn more about these fascinating creatures after they Build-A-Bug, learn about the life cycle, and of course, catch bugs!

<table>
<thead>
<tr>
<th>1. Mimic bug sounds with assorted materials to replicate the rubbing of wings, legs, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-1: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.</td>
</tr>
<tr>
<td>b. Waves and Their Applications In Technologies for Information Transfer/I-PS4-4: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.</td>
</tr>
<tr>
<td>2. Learn about bioluminescence in lightning bugs.</td>
</tr>
<tr>
<td>a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-2: Make observations to conduct an evidence-based account that objects can be seen only when illuminated.</td>
</tr>
<tr>
<td>3. Build a giant ladybug, dragonfly, and spider in this teambuilding activity to learn the different parts of insects and arachnids.</td>
</tr>
<tr>
<td>a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.</td>
</tr>
<tr>
<td>4. Discover metamorphosis and different life cycles of a variety of common insects.</td>
</tr>
<tr>
<td>a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.</td>
</tr>
<tr>
<td>b. Heredity: Inheritance and Variation of Traits/1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</td>
</tr>
<tr>
<td>5. Go on a bug hunt through different habitats using nets, bug boxes, and identifiers.</td>
</tr>
<tr>
<td>a. Heredity: Inheritance and Variation of Traits/1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</td>
</tr>
</tbody>
</table>
## FROGGIE FUN (Wetlands/Pond)

This field trip is ‘ribbiting!’ Students will hop into froggie fun as they explore the sounds of the pond, learn the frog life cycle, and play a froggie food chain game!

### 1. Mimic frog calls with assorted materials to replicate the calls of frogs in our area.
   - a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-1: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
   - b. Waves and Their Applications In Technologies for Information Transfer/I-PS4-4: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

### 2. Learn to detect nocturnal frogs in the darkest of conditions.
   - a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-2: Make observations to conduct an evidence-based account that objects can be seen only when illuminated.
   - b. Waves and Their Applications In Technologies for Information Transfer/I-PS4-2: Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.

### 3. Engage in fun as we dress up as frogs to learn about their external features.
   - a. From Molecules to Organisms: Structures and Processes/I-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

### 4. Discover the life cycle of frogs
   - a. From Molecules to Organisms: Structures and Processes/I-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
   - b. Heredity: Inheritance and Variation of Traits/I-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

### 5. Hike to the pond and discover various animals that call the pond home.
   - a. Heredity: Inheritance and Variation of Traits/I-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
TWEET (Woodlands)

Learn the birdie basics by acting like a fledgling to building a nest and more totally 'tweet' interactive activities!

1. Mimic the calls of birds over various distances to communicate different bird calls.
   a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-4: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.
2. Test different tools to mimic different bird beaks to test out the best one for different foods and birds.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
3. Play the Chickadee game to discover different bird call meanings and caring for young.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
4. Hike through the trails to discover common backyard birds and their young as well as other woodland animals.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
   b. Heredity: Inheritance and Variation of Traits/1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
5. Build a nest to fit your bird's needs.
   a. Engineering Design/K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
   b. Engineering Design/K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Discuss the concept of the four seasons and how plants and animals adapt with each season.
First Grade

ECO-ENGINEERS
Let your imagination run wild during this STEAM field trip! Become an Eco-Engineer after learning about biomimicry, exploring inventions inspired by nature and then building your own invention!

1. Explore adaptive traits of various animals to explore their external parts.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

2. Play the Nature Did It First game to learn about inventions inspired by nature.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

3. Explore different building materials and draw a concept of a problem solving invention.
   a. Engineering Design/K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
   b. Engineering Design/K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
   c. Engineering Design/K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Discuss the concept of the four seasons and how plants and animals adapt with each season.
First Grade

**NIGHTY NIGHT**

Whooo goes there in the dark?! Students will want to explore all night after learning about traits of nocturnal animals, stars, and constellations that are out when they are going ’nifty night!

1. Practice using a flashlight to discover nocturnal animal puppets on a scavenger hunt.
   a. Waves and Their Applications In Technologies for Information Transfer/I-PS4-2: Make observations to conduct an evidence-based account that objects can be seen only when illuminated.
   b. Waves and Their Applications In Technologies for Information Transfer/I-PS4-3: Plan and conduct an investigation to determine the effect of placing objects make with different materials in the path of a beam of light.

2. Engage in a dress up activity with owls to discover their external parts.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

3. Pretend to be a family of animals and learn about their basic needs, dangers, and more.
   a. From Molecules to Organisms: Structures and Processes/1-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
   b. Heredity: Inheritance and Variation of Traits/1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

4. Discuss sunrise, sunset, daylight, stars, and constellations using a star projector.
   a. Earth’s Place in the Universe/1-ESS1-1: Use observations of the sun, moon, and stars to describe patterns that can be predicted.
   b. Earth’s Place in the Universe/1-ESS1-2: Make observations at different times of year to relate the amount of daylight to the time of year.